

Re-run**RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/520,258  
Source: PCT  
Date Processed by STIC: 11/22/2005

***ENTERED***



PCT

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/520,258

DATE: 11/22/2005

TIME: 11:27:27

Input Set : N:\Crf4\Refhold\10\_folder\J520258.raw

Output Set: N:\CRF4\11212005\J520258.raw

1 <110> APPLICANT: NEXGEN BIOTECHNOLOGIES, INC.  
 2 SHONG, Min-Ho  
 3 LEE, Sun  
 4 YOO, Jae-Geun  
 5 JIN, Seok-Min  
 6 <120> TITLE OF INVENTION: Production of Transformed Plants Expressing Thyroid  
 Stimulating Hormone Receptor  
 7  
 8 <130> FILE REFERENCE: 20050-00003  
 9 <140> CURRENT APPLICATION NUMBER: US/10/520,258  
 10 <141> CURRENT FILING DATE: 2005-01-04  
 11 <150> PRIOR APPLICATION NUMBER: KR2002-38064  
 12 <151> PRIOR FILING DATE: 2002-07-02  
 13 <150> PRIOR APPLICATION NUMBER: PCT/KR2003/001308  
 14 <151> PRIOR FILING DATE: 2003-07-02  
 15 <160> NUMBER OF SEQ ID NOS: 2  
 16 <170> SOFTWARE: KopatentIn 1.71  
 18 <210> SEQ ID NO: 1  
 19 <211> LENGTH: 2292  
 20 <212> TYPE: DNA  
 21 <213> ORGANISM: Homo sapiens  
 22 <220> FEATURE:  
 23 <221> NAME/KEY: CDS  
 24 <222> LOCATION: (1)..(2289)  
 25 <400> SEQUENCE: 1  
 26 atg agg ccg gcg gac ttg ctg cag ctg gtg ctg ctg ctc gac ctg ccc 48  
 27 Met Arg Pro Ala Asp Leu Leu Gln Leu Val Leu Leu Leu Asp Leu Pro  
 28 1 5 10 15  
 29 agg gac ctg ggc gga atg ggg tgt tgc tct cca ccc tgc gag tgc cat 96  
 30 Arg Asp Leu Gly Gly Met Gly Cys Ser Ser Pro Pro Cys Glu Cys His  
 31 20 25 30  
 32 cag gag gag gac ttc aga gtc acc tgc aag gat att caa cgc atc ccc 144  
 33 Gln Glu Glu Asp Phe Arg Val Thr Cys Lys Asp Ile Gln Arg Ile Pro  
 34 35 40 45  
 35 agc tta ccg ccc agt acg cag act ctg aag ctt att gag act cac ctg 192  
 36 Ser Leu Pro Pro Ser Thr Gln Thr Leu Lys Leu Ile Glu Thr His Leu  
 37 50 55 60  
 38 aga act att cca agt cat gca ttt tct aat ctg ccc aat att tcc aga 240  
 39 Arg Thr Ile Pro Ser His Ala Phe Ser Asn Leu Pro Asn Ile Ser Arg  
 40 65 70 75 80  
 41 atc tac gta tct ata gat gtg act ctg cag cag ctg gaa tca cac tcc 288  
 42 Ile Tyr Val Ser Ile Asp Val Thr Leu Gln Gln Leu Glu Ser His Ser  
 43 85 90 95  
 44 ttc tac aat ttg agt aaa gtg act cac ata gaa att cgg aat acc agg 336

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/520,258

DATE: 11/22/2005

TIME: 11:27:27

Input Set : N:\Cr4\Refhold\10\_folder\J520258.raw

Output Set: N:\CRF4\11212005\J520258.raw

45	Phe Tyr Asn Leu Ser Lys Val Thr His Ile Glu Ile Arg Asn Thr Arg	
46	100 105 110	
47	aac tta act tac ata gac cct gat gcc ctc aaa gag ctc ccc ctc cta	384
48	Asn Leu Thr Tyr Ile Asp Pro Asp Ala Leu Lys Glu Leu Pro Leu Leu	
49	115 120 125	
50	aag tcc ttg gca ttt tca aac act gga ctt aaa atg ttc cct gac ctg	432
51	Lys Ser Leu Ala Phe Ser Asn Thr Gly Leu Lys Met Phe Pro Asp Leu	
52	130 135 140	
53	acc aaa gtt tat tcc act gat ata ttc ttt ata ctt gaa att aca gac	480
54	Thr Lys Val Tyr Ser Thr Asp Ile Phe Phe Ile Leu Glu Ile Thr Asp	
55	145 150 155 160	
56	aac cct tac atg acg tca atc cct gtg aat gct ttt cag gga cta tgc	528
57	Asn Pro Tyr Met Thr Ser Ile Pro Val Asn Ala Phe Gln Gly Leu Cys	
58	165 170 175	
59	aat gaa acc ttg aca ctg aag ctg tac aac aat ggc ttt act tca gtc	576
60	Asn Glu Thr Leu Thr Leu Lys Leu Tyr Asn Asn Gly Phe Thr Ser Val	
61	180 185 190	
62	caa gga tat gat ttc ttt ggg aca aag ctg gat gct gtt tac cta aac	624
63	Gln Gly Tyr Asp Phe Phe Gly Thr Lys Leu Asp Ala Val Tyr Leu Asn	
64	195 200 205	
65	aag aat aaa tac ctg aca gtt att gac aaa gat gca ttt gga gga gta	672
66	Lys Asn Lys Tyr Leu Thr Val Ile Asp Lys Asp Ala Phe Gly Gly Val	
67	210 215 220	
68	tac agt gga cca agc ttg ctg gac gtg tct caa acc agt gtc act gcc	720
69	Tyr Ser Gly Pro Ser Leu Leu Asp Val Ser Gln Thr Ser Val Thr Ala	
70	225 230 235 240	
71	ctt cca tcc aaa ggc ctg gag cac ctg aag gaa ctg ata gca aga aac	768
72	Leu Pro Ser Lys Gly Leu Glu His Leu Lys Glu Leu Ile Ala Arg Asn	
73	245 250 255	
74	agc tgg act ctt aag aaa ctt gca ctt tcc ttg agt ttc ctt cac ctc	816
75	Ser Trp Thr Leu Lys Lys Leu Ala Leu Ser Leu Ser Phe Leu His Leu	
76	260 265 270	
77	aca cgg gct gac ctt tct tac cca agc cac tgc tgt gct ttt aag aat	864
78	Thr Arg Ala Asp Leu Ser Tyr Pro Ser His Cys Cys Ala Phe Lys Asn	
79	275 280 285	
80	cag aag aaa atc aga gga atc ctt gag tcc ttg atg tgt aat gag agc	912
81	Gln Lys Lys Ile Arg Gly Ile Leu Glu Ser Leu Met Cys Asn Glu Ser	
82	290 295 300	
83	agt atc gag acg ttg cgc cag aga aaa tct gtg aat gcc ttg aat agc	960
84	Ser Ile Glu Thr Leu Arg Gln Arg Lys Ser Val Asn Ala Leu Asn Ser	
85	305 310 315 320	
86	ccc ctc cac cag gaa tat gaa gag aat ctg ggt gac agc att gtt ggg	1008
87	Pro Leu His Gln Glu Tyr Glu Glu Asn Leu Gly Asp Ser Ile Val Gly	
88	325 330 335	
89	tac aag gaa aag tcc aag ttc cag gat act cat aac aac gct cat tat	1056
90	Tyr Lys Glu Lys Ser Lys Phe Gln Asp Thr His Asn Asn Ala His Tyr	
91	340 345 350	
92	tac gtc ttc ttt gaa gaa caa gag gat gag atc att ggt ttt ggc cag	1104
93	Tyr Val Phe Phe Glu Glu Gln Glu Asp Glu Ile Ile Gly Phe Gly Gln	

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/520,258

DATE: 11/22/2005

TIME: 11:27:27

Input Set : N:\Crf4\Refhold\10\_folder\J520258.raw

Output Set: N:\CRF4\11212005\J520258.raw

94	355	360	365	
95	gag ctc aaa aac ccc cag gaa gag act cta caa gct ttt gac agc cat			1152
96	Glu Leu Lys Asn Pro Gln Glu Glu Thr Leu Gln Ala Phe Asp Ser His			
97	370	375	380	
98	cat gac tac acc ata tgt ggg gac agt gaa gac atg gtg tgt acc ccc			1200
99	Tyr Asp Tyr Thr Ile Cys Gly Asp Ser Glu Asp Met Val Cys Thr Pro			
100	385	390	395	400
101	aag tcc gat gag ttc aac ccg tgt gaa gac ata atg ggc tac aag ttc			1248
102	Lys Ser Asp Glu Phe Asn Pro Cys Glu Asp Ile Met Gly Tyr Lys Phe			
103	405	410	415	
104	ctg aga att gtg gtg tgg ttc gtt agt ctg ctg gct ctc ctg ggc aat			1296
105	Leu Arg Ile Val Val Trp Phe Val Ser Leu Leu Ala Leu Leu Gly Asn			
106	420	425	430	
107	gtc ttt gtc ctg ctt att ctc ctc acc agc cac tac aaa ctg aac gtc			1344
108	Val Phe Val Leu Leu Ile Leu Leu Thr Ser His Tyr Lys Leu Asn Val			
109	435	440	445	
110	ccc cgc ttt ctc atg tgc aac ctg gcc ttt gcg gat ttc tgc atg ggg			1392
111	Pro Arg Phe Leu Met Cys Asn Leu Ala Phe Ala Asp Phe Cys Met Gly			
112	450	455	460	
113	atg tac ctg ctc ctc atc gcc tct gta gac ctc tac act cac tct gag			1440
114	Met Tyr Leu Leu Leu Ile Ala Ser Val Asp Leu Tyr Thr His Ser Glu			
115	465	470	475	480
116	tac tac aac cat gcc atc gac tgg cag aca ggc cct ggg tgc aac acg			1488
117	Tyr Tyr Asn His Ala Ile Asp Trp Gln Thr Gly Pro Gly Cys Asn Thr			
118	485	490	495	
119	gct ggt ttc ttc act gtc ttt gca agc gag tta tgc gtg tat acg ctg			1536
120	Ala Gly Phe Phe Thr Val Phe Ala Ser Glu Leu Ser Val Tyr Thr Leu			
121	500	505	510	
122	acg gtc atc acc ctg gag cgc tgg tat gcc atc acc ttc gcc atg gcc			1584
123	Thr Val Ile Thr Leu Glu Arg Trp Tyr Ala Ile Thr Phe Ala Met Ala			
124	515	520	525	
125	ctg gac cgg aag atc cgc ctc agg cac gca tgt gcc atc atg gtt ggg			1632
126	Leu Asp Arg Lys Ile Arg Leu Arg His Ala Cys Ala Ile Met Val Gly			
127	530	535	540	
128	ggc tgg gtt tgc tgc ttc ctt ctc gcc ctg ctt cct ttg gtg gga ata			1680
129	Gly Trp Val Cys Cys Phe Leu Leu Ala Leu Leu Pro Leu Val Gly Ile			
130	545	550	555	560
131	agt agc tat gcc aaa gtc agt atc tgc ctg ccc atg gac acc gag acc			1728
132	Ser Ser Tyr Ala Lys Val Ser Ile Cys Leu Pro Met Asp Thr Glu Thr			
133	565	570	575	
134	cct ctt gct ctg gca tat att gtt ttt gtt ctg acg ctc aac ata gtt			1776
135	Pro Leu Ala Leu Ala Tyr Ile Val Phe Val Leu Thr Leu Asn Ile Val			
136	580	585	590	
137	gcc ttc gtc atc gtc tgc tgc tgt tat gtg aag atc tac atc aca gtc			1824
138	Ala Phe Val Ile Val Cys Cys Cys Tyr Val Lys Ile Tyr Ile Thr Val			
139	595	600	605	
140	cga aat ccg cac aac cca ggg gac aaa gat acc aaa att gcc aag agg			1872
141	Arg Asn Pro His Asn Pro Gly Asp Lys Asp Thr Lys Ile Ala Lys Arg			
142	610	615	620	

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/520,258

DATE: 11/22/2005

TIME: 11:27:27

Input Set : N:\CrF4\Refhold\10\_folder\J520258.raw

Output Set: N:\CRF4\11212005\J520258.raw

```

143   atg gct gtg ttg atc ttc acc gac ttc acg tgc atg gcc cca atc tca
144   Met Ala Val Leu Ile Phe Thr Asp Phe Thr Cys Met Ala Pro Ile Ser      1920
145   625                               630                               635                               640
146   ttc tat gct gtg tca gca att ctg aac aag cct ctc atc act gtt agc
147   Phe Tyr Ala Val Ser Ala Ile Leu Asn Lys Pro Leu Ile Thr Val Ser      1968
148   645                               650                               655
149   aac tcc aaa atc ttg ctg gta ctc ttc tat cca att aac tcc tgt gcc
150   Asn Ser Lys Ile Leu Leu Val Leu Phe Tyr Pro Ile Asn Ser Cys Ala      2016
151   660                               665                               670
152   aat cca ttc ctc tat gct att ttc acc aag gcc ttc cag agg gat gtg
153   Asn Pro Phe Leu Tyr Ala Ile Phe Thr Lys Ala Phe Gln Arg Asp Val      2064
154   675                               680                               685
155   ttc atc cta ctc agc aag ttt ggc atc tgt aaa cgc cag gct cag gca
156   Phe Ile Leu Leu Ser Lys Phe Gly Ile Cys Lys Arg Gln Ala Gln Ala      2112
157   690                               695                               700
158   tac cgg ggg cag agg gtt cct cca aag aac agc act gat att cag gtt
159   Tyr Arg Gly Gln Arg Val Pro Pro Lys Asn Ser Thr Asp Ile Gln Val      2160
160   705                               710                               715                               720
161   caa aag gtt acc cac gac atg agg cag ggt ctc cac aac atg gaa gat
162   Gln Lys Val Thr His Asp Met Arg Gln Gly Leu His Asn Met Glu Asp      2208
163   725                               730                               735
164   gtc tat gaa ctg att gaa aac tcc cat cta acc cca aag aag caa ggc
165   Val Tyr Glu Leu Ile Glu Asn Ser His Leu Thr Pro Lys Lys Gln Gly      2256
166   740                               745                               750
167   caa atc tca gaa gag tat atg caa acg gtt ttg                t aa
168   Gln Ile Ser Glu Glu Tyr Met Gln Thr Val Leu                        2292
169   755                               760

171 <210> SEQ ID NO: 2
172 <211> LENGTH: 763
173 <212> TYPE: PRT
174 <213> ORGANISM: Homo sapiens
175 <400> SEQUENCE: 2
176   Met Arg Pro Ala Asp Leu Leu Gln Leu Val Leu Leu Leu Asp Leu Pro
177   1                               5                               10                               15
178   Arg Asp Leu Gly Gly Met Gly Cys Ser Ser Pro Pro Cys Glu Cys His
179   20                               25                               30
180   Gln Glu Glu Asp Phe Arg Val Thr Cys Lys Asp Ile Gln Arg Ile Pro
181   35                               40                               45
182   Ser Leu Pro Pro Ser Thr Gln Thr Leu Lys Leu Ile Glu Thr His Leu
183   50                               55                               60
184   Arg Thr Ile Pro Ser His Ala Phe Ser Asn Leu Pro Asn Ile Ser Arg
185   65                               70                               75                               80
186   Ile Tyr Val Ser Ile Asp Val Thr Leu Gln Gln Leu Glu Ser His Ser
187   85                               90                               95
188   Phe Tyr Asn Leu Ser Lys Val Thr His Ile Glu Ile Arg Asn Thr Arg
189   100                              105                              110
190   Asn Leu Thr Tyr Ile Asp Pro Asp Ala Leu Lys Glu Leu Pro Leu Leu
191   115                              120                              125
192   Lys Ser Leu Ala Phe Ser Asn Thr Gly Leu Lys Met Phe Pro Asp Leu

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/520,258

DATE: 11/22/2005

TIME: 11:27:27

Input Set : N:\Crf4\Refhold\10\_folder\J520258.raw

Output Set: N:\CRF4\11212005\J520258.raw

```

193      130      135      140
194 Thr Lys Val Tyr Ser Thr Asp Ile Phe Phe Ile Leu Glu Ile Thr Asp
195 145      150      155      160
196 Asn Pro Tyr Met Thr Ser Ile Pro Val Asn Ala Phe Gln Gly Leu Cys
197      165      170      175
198 Asn Glu Thr Leu Thr Leu Lys Leu Tyr Asn Asn Gly Phe Thr Ser Val
199      180      185      190
200 Gln Gly Tyr Asp Phe Phe Gly Thr Lys Leu Asp Ala Val Tyr Leu Asn
201      195      200      205
202 Lys Asn Lys Tyr Leu Thr Val Ile Asp Lys Asp Ala Phe Gly Gly Val
203      210      215      220
204 Tyr Ser Gly Pro Ser Leu Leu Asp Val Ser Gln Thr Ser Val Thr Ala
205 225      230      235      240
206 Leu Pro Ser Lys Gly Leu Glu His Leu Lys Glu Leu Ile Ala Arg Asn
207      245      250      255
208 Ser Trp Thr Leu Lys Lys Leu Ala Leu Ser Leu Ser Phe Leu His Leu
209      260      265      270
210 Thr Arg Ala Asp Leu Ser Tyr Pro Ser His Cys Cys Ala Phe Lys Asn
211      275      280      285
212 Gln Lys Lys Ile Arg Gly Ile Leu Glu Ser Leu Met Cys Asn Glu Ser
213      290      295      300
214 Ser Ile Glu Thr Leu Arg Gln Arg Lys Ser Val Asn Ala Leu Asn Ser
215 305      310      315      320
216 Pro Leu His Gln Glu Tyr Glu Glu Asn Leu Gly Asp Ser Ile Val Gly
217      325      330      335
218 Tyr Lys Glu Lys Ser Lys Phe Gln Asp Thr His Asn Asn Ala His Tyr
219      340      345      350
220 Tyr Val Phe Phe Glu Glu Gln Glu Asp Glu Ile Ile Gly Phe Gly Gln
221      355      360      365
222 Glu Leu Lys Asn Pro Gln Glu Glu Thr Leu Gln Ala Phe Asp Ser His
223      370      375      380
224 Tyr Asp Tyr Thr Ile Cys Gly Asp Ser Glu Asp Met Val Cys Thr Pro
225 385      390      395      400
226 Lys Ser Asp Glu Phe Asn Pro Cys Glu Asp Ile Met Gly Tyr Lys Phe
227      405      410      415
228 Leu Arg Ile Val Val Trp Phe Val Ser Leu Leu Ala Leu Leu Gly Asn
229      420      425      430
230 Val Phe Val Leu Leu Ile Leu Leu Thr Ser His Tyr Lys Leu Asn Val
231      435      440      445
232 Pro Arg Phe Leu Met Cys Asn Leu Ala Phe Ala Asp Phe Cys Met Gly
233      450      455      460
234 Met Tyr Leu Leu Leu Ile Ala Ser Val Asp Leu Tyr Thr His Ser Glu
235 465      470      475      480
236 Tyr Tyr Asn His Ala Ile Asp Trp Gln Thr Gly Pro Gly Cys Asn Thr
237      485      490      495
238 Ala Gly Phe Phe Thr Val Phe Ala Ser Glu Leu Ser Val Tyr Thr Leu
239      500      505      510
240 Thr Val Ile Thr Leu Glu Arg Trp Tyr Ala Ile Thr Phe Ala Met Ala
241      515      520      525

```

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/520,258

DATE: 11/22/2005  
TIME: 11:27:28

Input Set : N:\Crf4\Refhold\10\_folder\J520258.raw  
Output Set: N:\CRF4\11212005\J520258.raw

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 6,26,29,32,35,38,41,44,47,50,53,56,59,62,65,68,71,74,77,80  
Seq#:1; Line(s) 83,86,89,92,95,98,101,104,107,110,113,116,119,122,125,128  
Seq#:1; Line(s) 131,134,137,140,143,146,149,152,155,158,161,164,167

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/520,258

DATE: 11/22/2005

TIME: 11:27:28

Input Set : N:\Crf4\Refhold\10\_folder\J520258.raw

Output Set: N:\CRF4\11212005\J520258.raw